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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,805	11/26/2003	Patrick Hosein	4740-230	9768
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COATS & BENNETT, PLLC 1400 Crescent Green, Suite 300 Cary, NC 27518			EXAMINER ELCENKO, ERIC J	
			ART UNIT 2617	PAPER NUMBER
			MAIL DATE 12/12/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/723,805	Applicant(s) HOSEIN ET AL.	
	Examiner Eric Elcenko	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-9, 11, 14-20, 24 and 25 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 10, 12, 13 and 21-23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 4, 7, 11, 14, 15 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Tiedman, JR et al. (U.S. Pub. No. 2001/0017848)

In regard to Claim 1, Tiedman teaches receiving a load indication from a base station indicative of a reverse link load; and adjusting the power headroom of the mobile station based on the load indication. (*Tiedman teaches a congestion control mechanisms. Excessive loading on the R-ACH can create a substantial load on the reverse link limiting performance of mobile stations. Actual throughput may decrease after a certain load, read in the instant case as threshold, is reached on the reverse link. Power control bits are used for congestion control. The power bits are used to tell mobile stations to increase or decrease their power. This essentially changes the power headroom of the mobile station. There is a set amount of power that can be used, designated as Pmax in applicants Fig 5. After a certain load is reached on the reverse link as explained above the congestion control tells mobile stations to increase*

or decrease their power, Pt on applicant's Fig 5., which indirectly changes the power headroom of the mobile stations. Para 10, 48)

In regard to Claim 14, Tiedman teaches a receiver for receiving load indication from a base station. a transmitter for transmitting signals to the base station at a variable data transmission rate dependent on the load indication and a controller to vary the power headroom threshold for the transmitter based on the load indication from the base station. *(The MS would inherently have a receiver and transmitter as it communicates both ways with the base station sending the load indication and the power bits for congestion control to the mobile stations. A controller is also inherently present to read and interpret the power control bits from the base station which change the power of the mobile station. Para 10,48)*

In regard to Claims 4, 7 and 17-18, Tiedman teaches receiving load indication from a base station comprises receiving a periodic load indication. *(It is inherent in order to maintain congestion control, periodic load reports must be used to keep a constant control over the loading on the reverse link as described. Para 10,48)*

In regard to Claim 11. Tiedman teaches wherein adjusting the power headroom of the mobile station based on the load indication comprises determining the power headroom threshold as a function of the load tracking value. *(The power control mechanisms used for congestion control, which indirectly affect the power headroom by varying the power of the mobile stations is based upon the load on the reverse link. Para 10,48)*

In regard to Claim 15, Tiedman teaches wherein the power headroom threshold limits the data transmission rate of the mobile station. *(the actual throughput may decrease after a certain load is reached on the reverse link. Para 10.)*

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 3 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tiedman, JR et al. (U.S. Pub. No. 2001/0017848) in view of Gopalakrishnann et al. (U.S. Pub. No. 2002/0110101)

In regard to Claims 2,3 and 16, Tiedman does not teach using an upper layer message on a common control channel.

Gopalakrishnann teaches using upper layer messages passed to the mobile on a appropriate common control channel. (para 68)

It would have been obvious to one of ordinary skill in the art to modify Tiedman to include the teachings of Gopalakrishnann in order to allow for the most efficient messaging depending upon how fast and periodically the code space is changing.

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5. Claims 8, 9 and 19-20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tiedman, JR et al. (U.S. Pub. No. 2001/0017848) in view of Lakkakorpi (U.S. Pub. No. 2003/0179704)

In regard to Claim 8-9 and 19-20, Tiedman does not disclose calculating a weighted average of two or more load indications.

Lakkakorpi teaches the link load is determined by an exponential averaging equation with configurable weighting. Fig 5 shows the overview of the equation used over a window set of any size.

It would have been obvious to one of ordinary skill in the art to modify Tiedman to include the teachings of Lakkakorpi in order to provide a more reliable measurement of the load on which to base changes getting a wider margin of measurements rather than a single measurement which could be a reading where a power spike or fallout occurs giving a false reading.

6. Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tiedman, JR et al. (U.S. Pub. No. 2001/0017848) in view of Raaf (U.S. Pub. No. 204/0029604)

In regard to Claims 24 and 25, Tiedman teaches receiving a load indication from a base station indicative of a reverse link load; and adjusting the power headroom of the mobile station based on the load indication. (*Tiedman teaches a congestion control mechanisms. Excessive loading on the R-ACH can create a substantial load on the reverse link limiting performance of mobile stations. Actual throughput may decrease*

after a certain load, read in the instant case as threshold, is reached on the reverse link. Power control bits are used for congestion control. The power bits are used to tell mobile stations to increase or decrease their power. This essentially changes the power headroom of the mobile station. There is a set amount of power that can be used, designated as P_{max} in applicants Fig 5. After a certain load is reached on the reverse link as explained above the congestion control tells mobile stations to increase or decrease their power, P_t on applicant's Fig 5., which indirectly changes the power headroom of the mobile stations. Para 10, 48)

Tiedman does not teach counting the number of times the mobile station is power limited for retransmission of a frame.

Raaf teaches providing for the number of retransmissions of the preamble with the maximum permissible power to be counted by a counter in step 212. (Para 45)

It would have been obvious to one of ordinary skill in the art to modify Tiedman to include the teachings of Raaf in order to allow for a more efficient method for changing the headroom by allowing for multiple readings of the power at a maximum before changing the headroom to allow enough power for further retransmissions.

Allowable Subject Matter

7. Claims 5-6, 10, 12-13 and 21-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Elcenko whose telephone number is (571) 272-8066. The examiner can normally be reached on M-F 7:30 AM through 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duc Nguyen can be reached on (571) 272-7503. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ee


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